

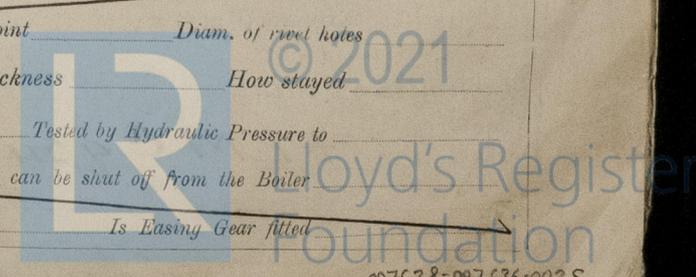
REPORT ON MACHINERY.

Date of writing Report 26.7.1924 When handed in at Local Office 8-9-1924 Port of GREENOCK
 No. in Survey held at Greenock Date, First Survey 11th June, 1923 Last Survey 2nd September 1924
 Reg. Book. S/S "Farnworth" (Number of Visits 6)
 Master Built at Glasgow By whom built Blythwood Steel Co. 1907 When built 1924
 Engines made at Greenock By whom made John & Kinnaird Co. 603 when made 1924
 Boilers made at ditto By whom made ditto when made 1924
 Registered Horse Power _____ Owners _____ Port belonging to Newcastle
 Nom. Horse Power as per Section 28 425 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triples Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26" - 42" - 41" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 14.557 Material of S
 as fitted 14.347 screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight
 in the propeller boss yes If the liner is in more than one length are the joints burned - If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive - If two
 liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 60"
 Dia. of Tunnel shaft as per rule 12.99 Dia. of Crank shaft journals as per rule 13.683 Dia. of Crank pin 13 3/4" Size of Crank webs 26 1/2" x 8 3/4" Dia. of thrust shaft under
 collars 13 3/4" Dia. of screw 17.9" Pitch of Screw 18.0" No. of Blades 4 State whether moveable no Total surface 100 sq
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps (Ballm) 9+13+10+9 5/8+5+8 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2. 3" Stohelwood- 1. 3 1/2" In Holds, &c. 2. 3" 901 2 3 1/2" 902 2 3" 904
 No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size yes 5"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible -
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
 What pipes are carried through the bunkers Bilge Suctions How are they protected Steel casing
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from U.E.R. Platform

BOILERS, &c.—(Letter for record R) Manufacturers of Steel Thuer. Mannesmannrohrwerke AG Gusslo-Funk
 Total Heating Surface of Boilers 7167 sq Is Forced Draft fitted no No. and Description of Boilers 3 Single End
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 29.5.24 No. of Certificate 1654
 Can each boiler be worked separately yes Area of fire grate in each boiler 63.3 sq No. and Description of Safety Valves to
 each boiler Double Spring Area of each valve 8.27 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 60" Mean dia. of boilers 16.0" Length 11.6" Material of shell plates S
 Thickness 1 5/16" Range of tensile strength 28/32 Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams DR
 long. seams TR.D.B.S Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/4" Top of plates or width of butt straps 1.70/8"
 Per centages of strength of longitudinal joint rivets: 85.85 Working pressure of shell by rules 184 Size of manhole in shell 16 1/2 x 20 1/2
 plate 85.8 Size of compensating ring 32 x 36 x 1 1/2" No. and Description of Furnaces in each boiler 3 Bouygade Material S Outside diameter 4.2 1/4"
 Length of plain part top 19 1/2" Thickness of plates bottom 19 1/2" Description of longitudinal joint weld No. of strengthening rings -
 Working pressure of furnace by the rules 183 Combustion chamber plates: Material S Thickness: Sides 1 1/16" Back 5/8" Top 1 1/16" Bottom 1 3/16"
 Pitch of stays to ditto: Sides 9 3/4 x 8" Back 8 3/4 x 8 3/8" Top 9 3/4 x 9 3/8" If stays are fitted with nuts or riveted heads yes Working pressure by rules 181
 Material of stays S Area at smallest part 1.73 Area supported by each stay 91.3 Working pressure by rules 190 End plates in steam space:
 Material S Thickness 1 1/8" Pitch of stays 19 1/2 x 16" How are stays secured DN.W. Working pressure by rules 185 Material of stays S
 Area at smallest part 6.66 Area supported by each stay 313 Working pressure by rules 194 Material of Front plates at bottom S
 Thickness 1 1/32" Material of Lower back plate S Thickness 25/32" Greatest pitch of stays 13 3/4" Working pressure of plate by rules 194
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates S Thickness: Front 1 1/32" Back 25/32" Mean pitch of stays 10 3/8"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 187 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 10 1/8 x 7 1/8 (2) Length as per rule 40.6 Distance apart 9 3/8" Number and pitch of stays in each 3 at 9 3/4"
 Working pressure by rules 181 Steam dome: description of joint to shell _____ % of strength of joint _____

DIAPHRAGM. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
 Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
 Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____



IS A DONKEY BOILER FITTED?

90 ✓

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:— 2 Connecting Rod both ends ditto for bottom end. 2 Main Bearing both. 1 set of Coupling bolts one set of Feed. Pump Gaskets 1 set of Piston Rings, a quantity of ammonia bolts nuts, Iron of various sizes. Spare Propeller shaft complete.

The foregoing is a correct description, FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green

Secretary

Manufacturer.

Dates of Survey while building: During progress of work in shops (1923) June 11. Oct 13-30. Nov: 7-12. Dec: 5-13-17-24-27. (1924) Jan: 9-11-23-30. Feb: 4-13-28. Mar: 6-11-24-27. During erection on board vessel: Apr: 3-9-10-16-21-22-25-30. May: 9-21-29. June: 3-10-17-18-19-24-30. July: 1-15-18-22-23-24-25-29-30-31. Aug: 4-6-7-11-13-18-19. Total No. of visits: 62. Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts—Cylinders 10.6.24 Slides 19.6.24 Covers 10.6.24 Pistons 19.6.24 Rods 20.6.24 Connecting rods 20.6.24 Crank shaft 30.6.24 Thrust shaft 30.6.24 Tunnel shafts 30.6.24 Screw shaft 1.7.24 Propeller 30.6.24 Stern tube 19.6.24 Steam pipes tested 8.8.24 Engine and boiler seatings on 4th Rept Engines holding down bolts 8.8.24 Completion of pumping arrangements 27.8.24 Boilers fixed 8.8.24 Engines tried under steam 2-9.24 Completion of fitting sea connections on 4th Rept Stern tube on 4th Rept Screw shaft and propeller 23-7.24 Main boiler safety valves adjusted 27.8.24 Thickness of adjusting washers P 3/8 S 23/64 S 3/8 P 3/8 P 22/32 S 5/16 Identification Mark on Do. Lloyd's WGM 7082 Lloyd's WGM 4998 Material of Crank shaft S Identification Marks on Do. 7046 Material of Thrust shaft S Identification Marks on Do. 7046 Material of Tunnel shafts S Identification Marks on Do. 703 Material of Screw shafts S Identification Marks on Do. 703 Material of Steam Pipes Copper (SD) ✓ Test pressure 360 lbs ✓ Is an installation fitted for burning oil fuel? No Is the flash point of the oil to be used over 150°F? — Have the requirements of Section 49 of the Rules been complied with? — Is this machinery duplicate of a previous case? No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) These Engines & Boilers have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality. They have now been securely fitted on board, tried under steam & found satisfactory. The machinery is eligible in my opinion for the record of LMC 19-24

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.24. CL.

W. Gordon-Murdoch 18/9/04

W. Gordon-Murdoch Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - : When applied for. Special ... £ 88 : 15 : 4-9-1924. Donkey Boiler Fee ... £ : : When received. Travelling Expenses (if any) £ : : 1924

Committee's Minute GLASGOW 16 SEP 1924

Assigned + LMC 9.24 CERTIFICATE WRITTEN 17.9.24



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GREENOCK

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.